FIG. 1

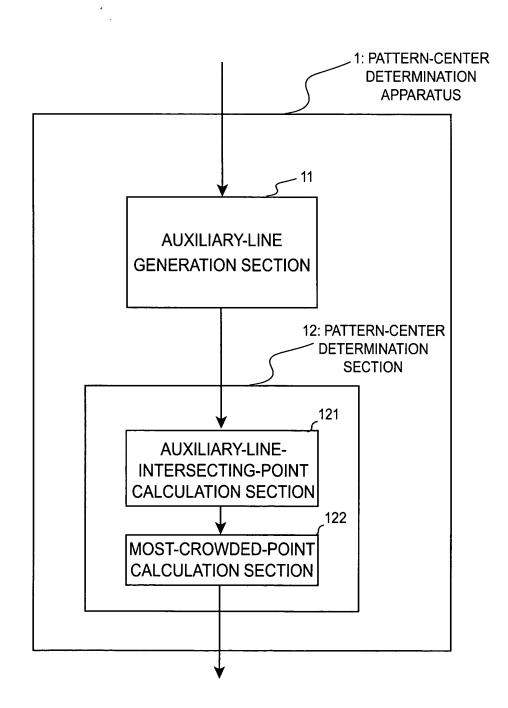
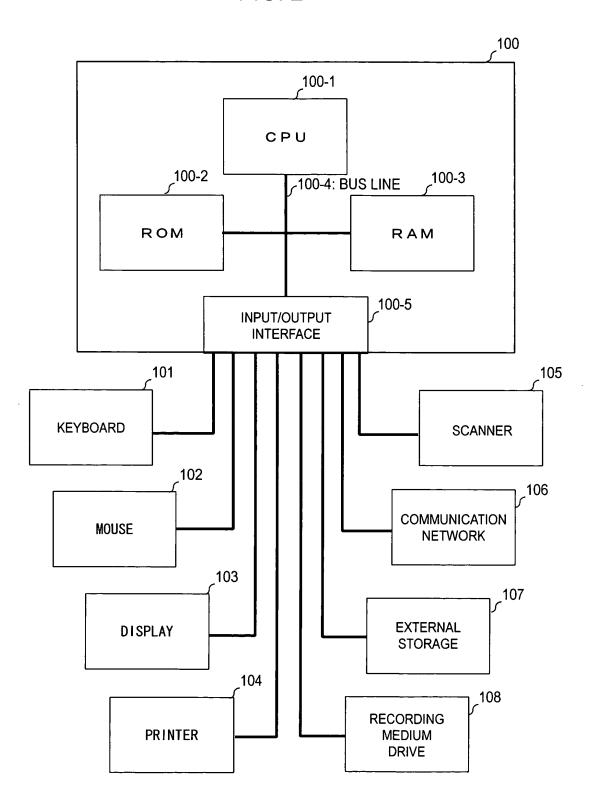


FIG. 2



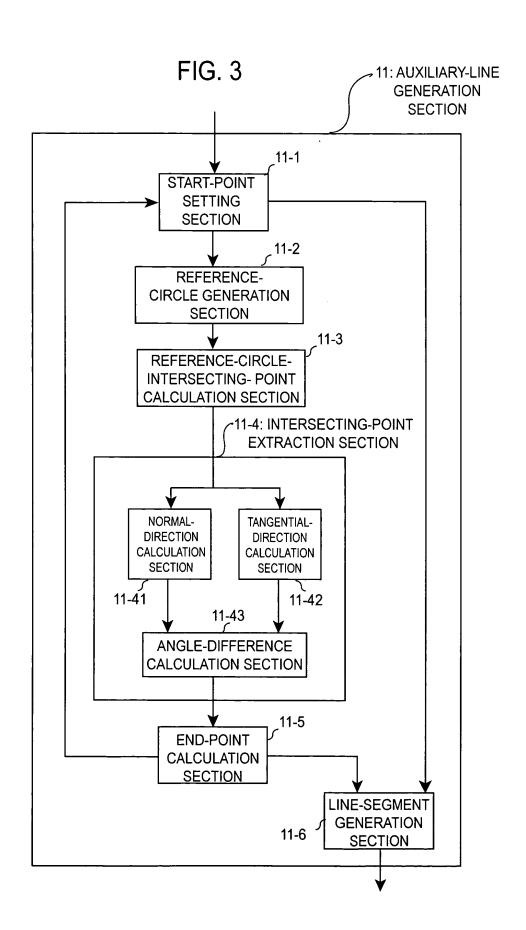


FIG. 4

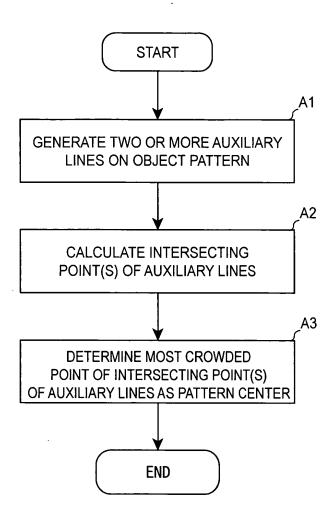


FIG. 5

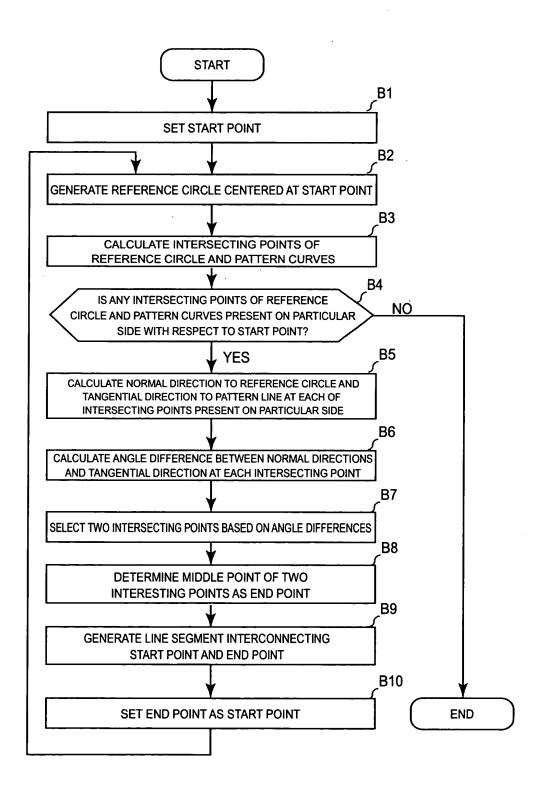


FIG. 6(A)

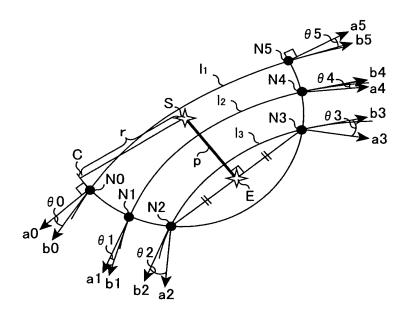


FIG. 6(B)

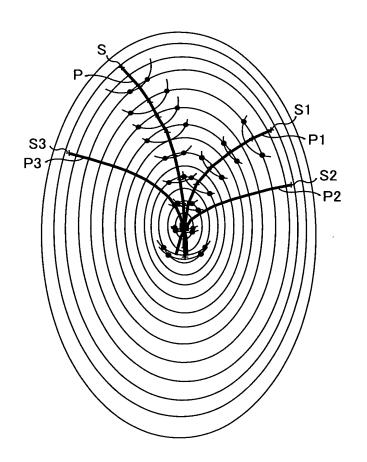


FIG. 7

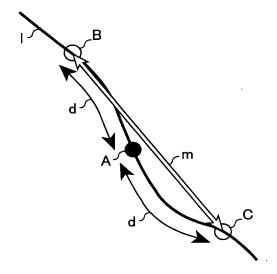


FIG. 8

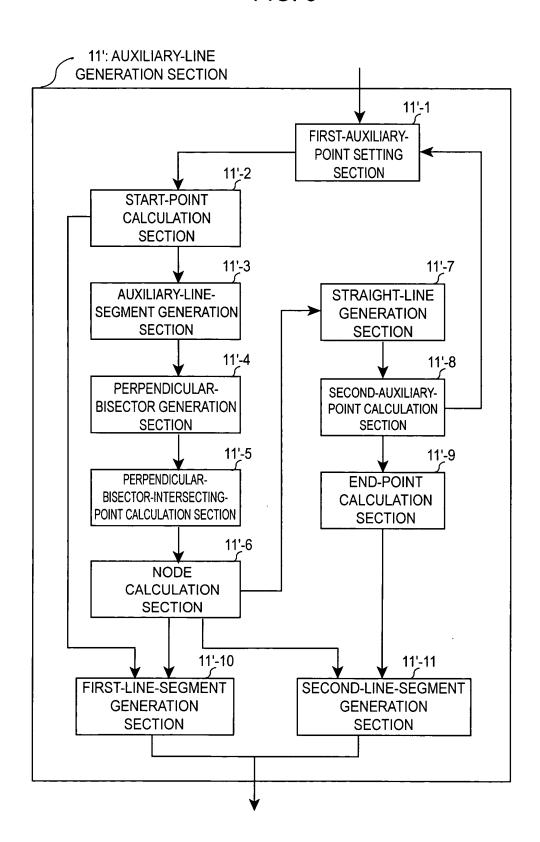


FIG. 9

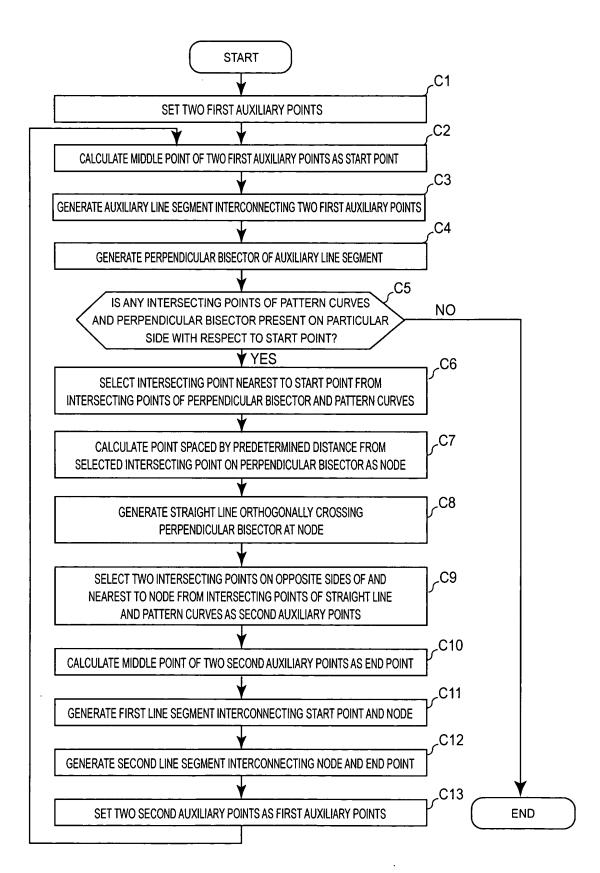


FIG. 10(A)

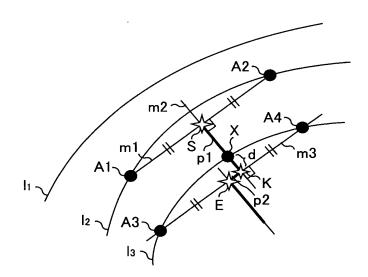


FIG. 10(B)

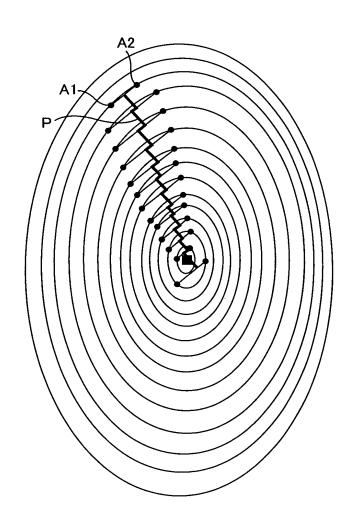


FIG. 11

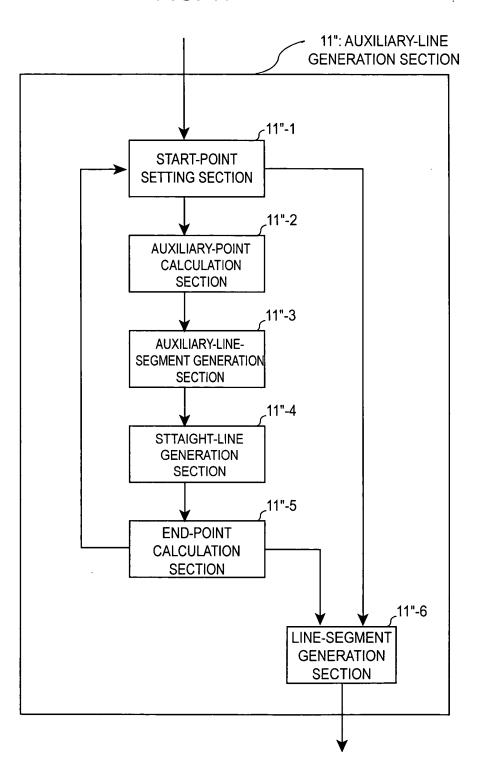


FIG. 12

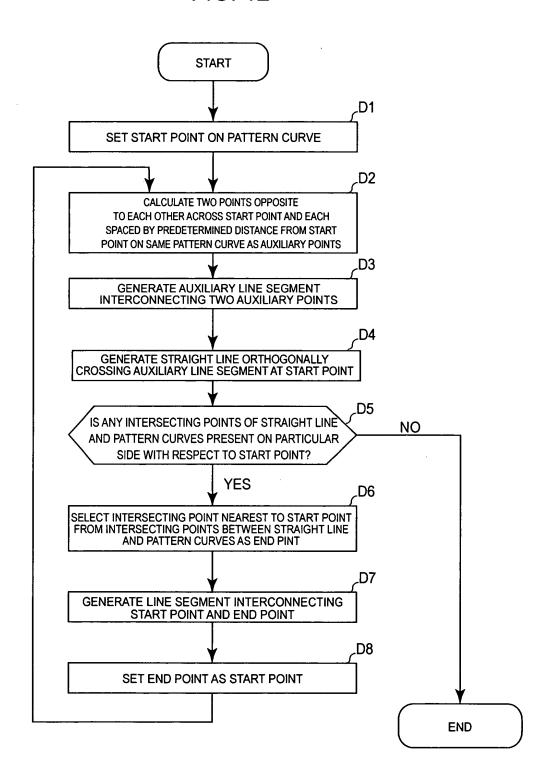


FIG. 13(A)

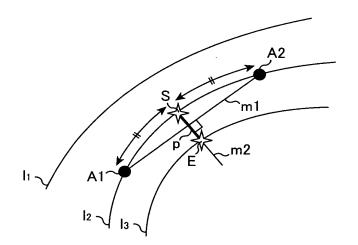


FIG. 13(B)

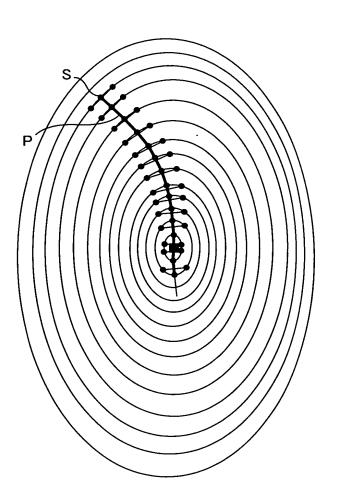


FIG. 14

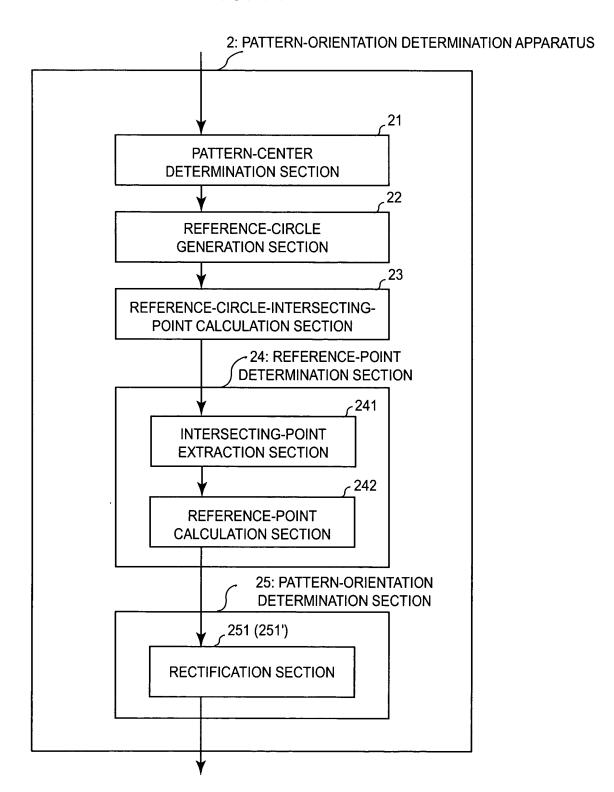


FIG. 15

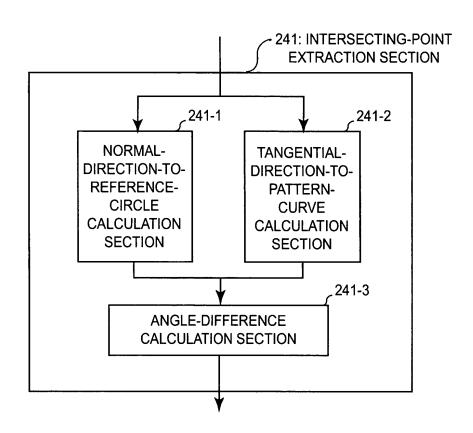


FIG. 16

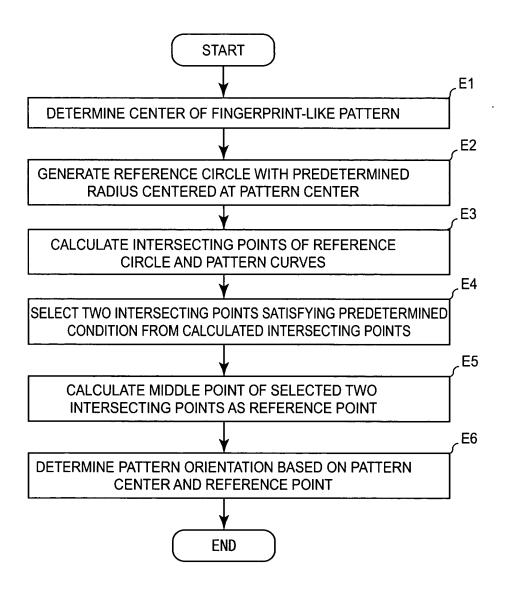


FIG. 17

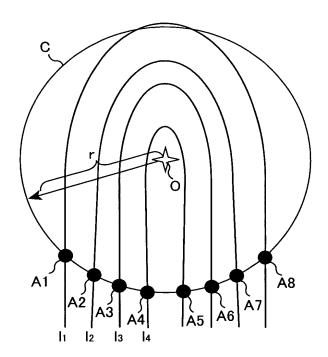


FIG. 18

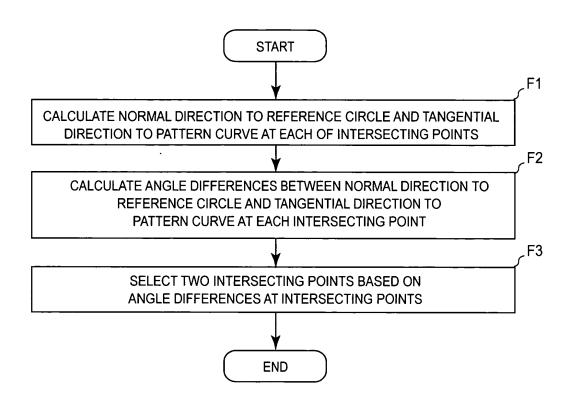


FIG. 19

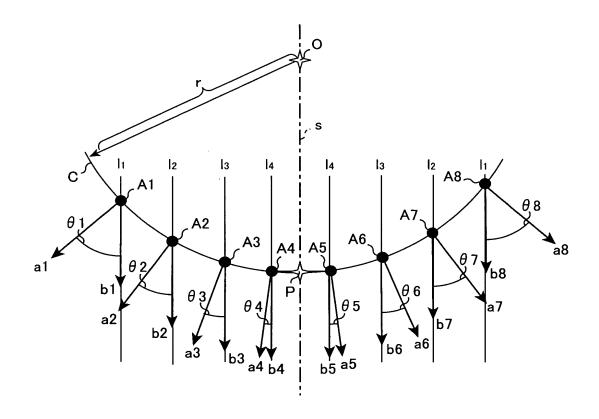


FIG. 20(A)

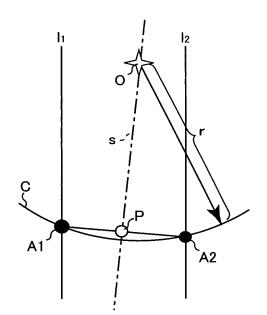


FIG. 20(B)

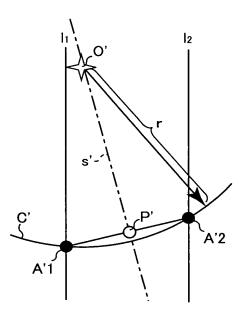


FIG. 21

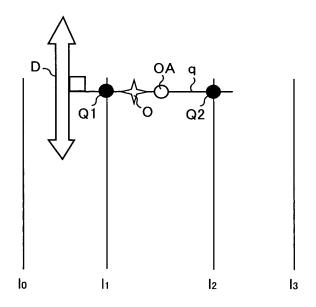


FIG. 22

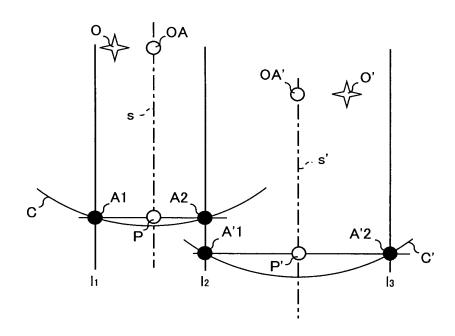


FIG. 23

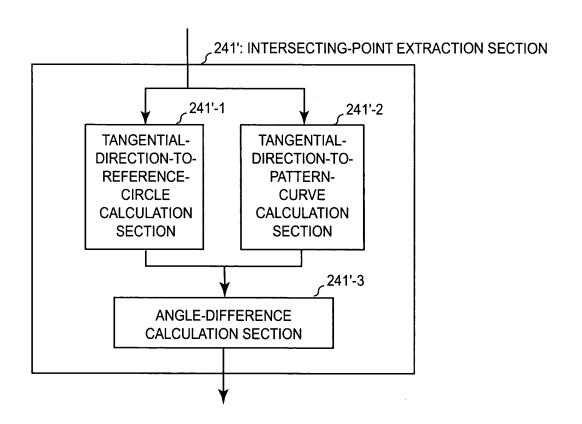


FIG. 24

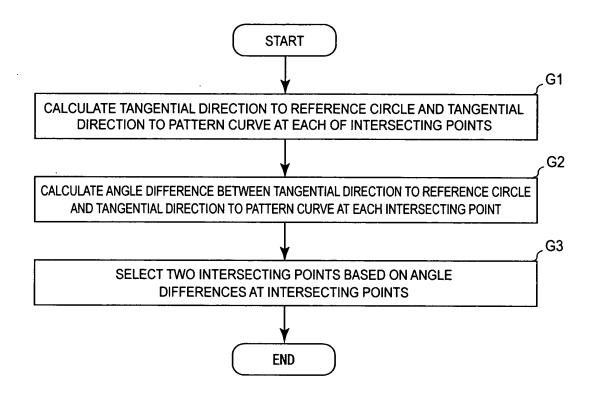


FIG. 25

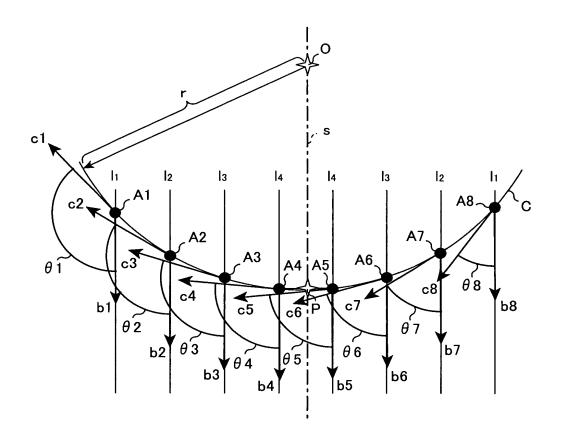


FIG. 26

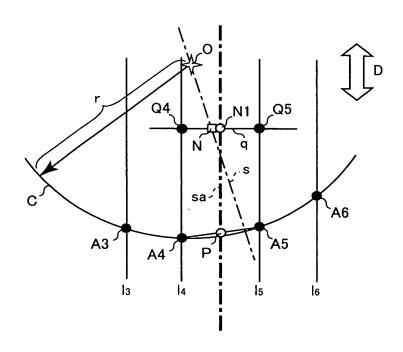


FIG. 27

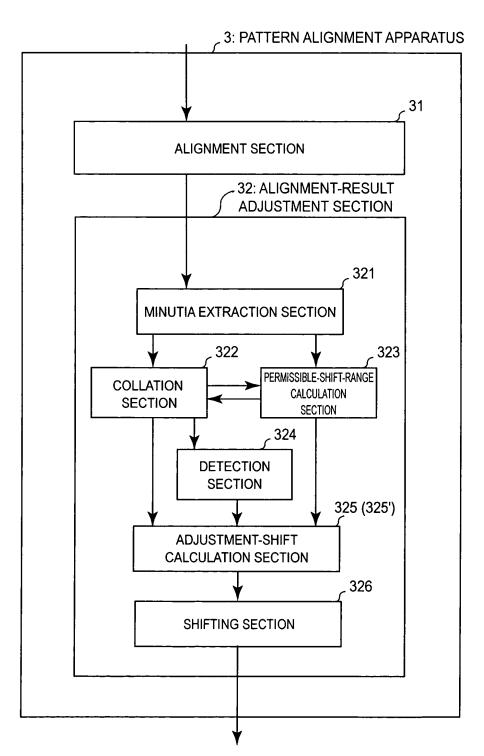
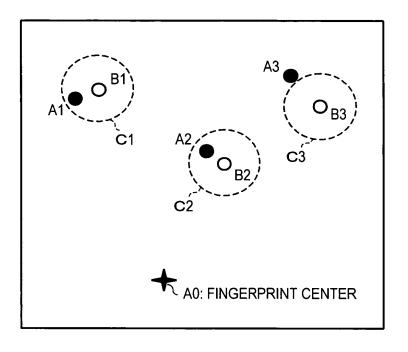


FIG. 28



: MINUTIAE OF FINGERPRINT A

O: MINUTIAE OF FINGERPRINT B

: THRESHOLD AREA FOR COINCIDENCE OF MINUTIAE

FIG. 29

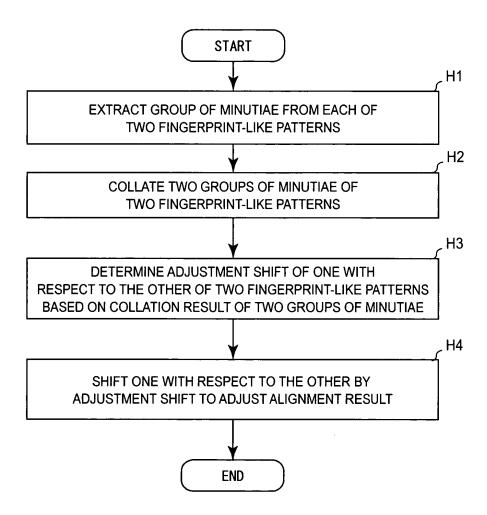


FIG. 30(A)

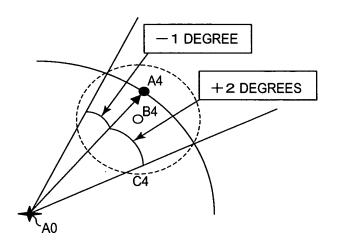
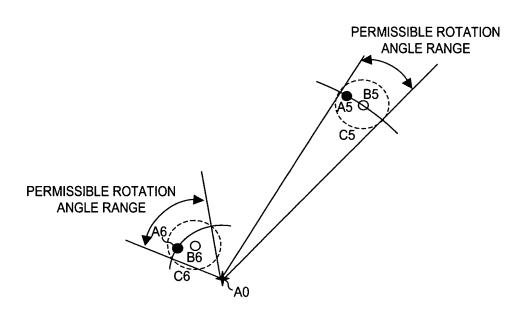
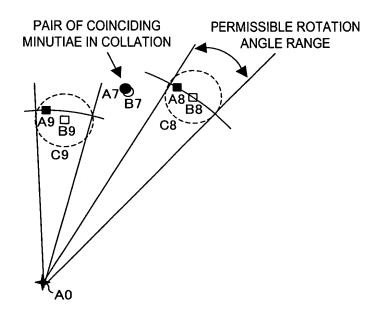


FIG. 30(B)



## FIG. 30(C)



C8, C9: PERMISSIBLE ROTATION ANGLE RANGES CORRSPONDING TO COINCIDING MINUTIA PAIRS (A8, B8), (A9, B9) IN COLLATION, RESPECTIVELY

■ □ : PERIPHERAL MINUTIAE

FIG. 31

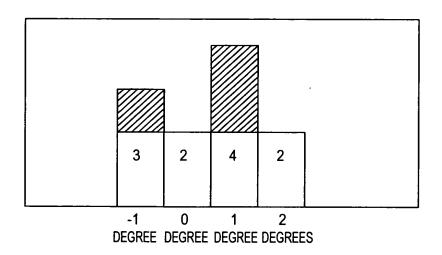


FIG. 32

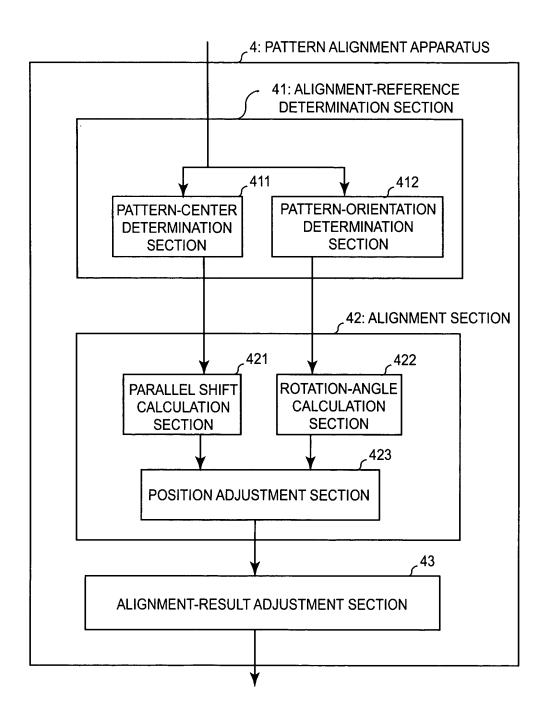


FIG. 33

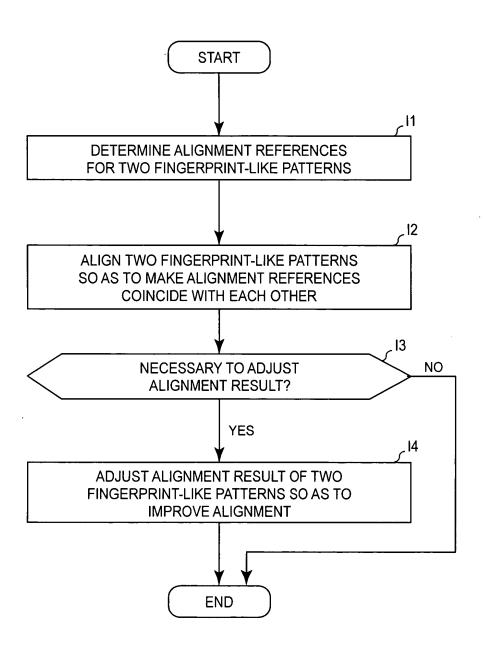


FIG. 34

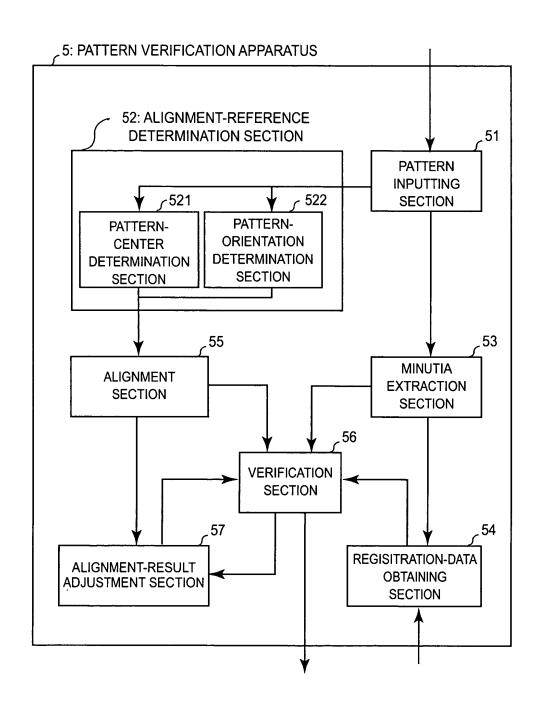


FIG. 35

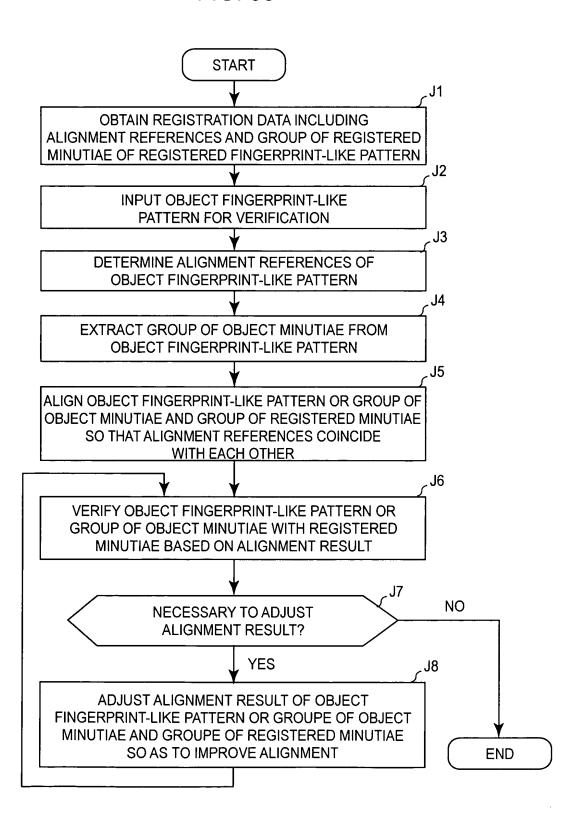


FIG. 36

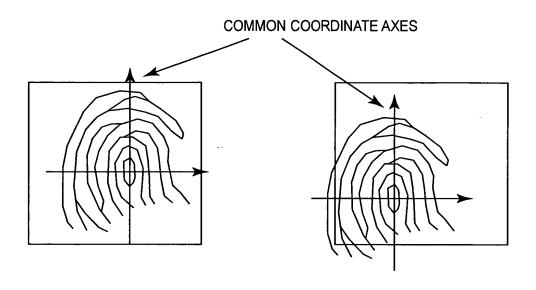


FIG. 37

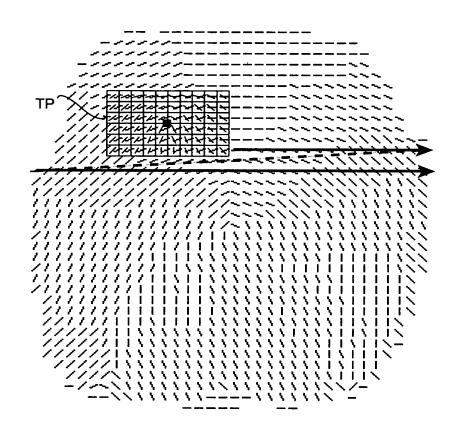
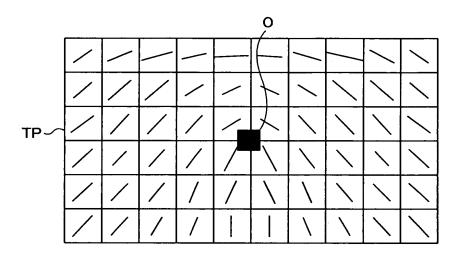


FIG. 38

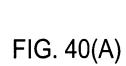


■ : CENTER "O" OF FINGERPRINT

\_

FIG. 39

| DIRECTION |
|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 0         | 1         | 2         | 3         | 4         | 5         | 6         | 7         |
|           | /         |           | /         |           | \         | /         | /         |



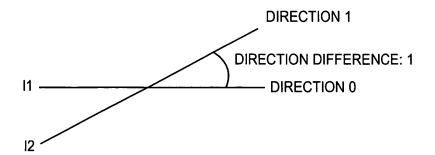
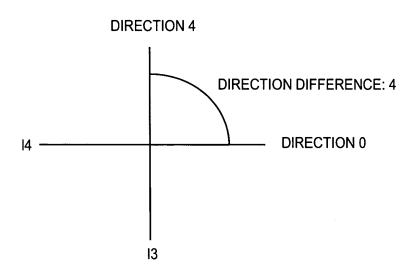


FIG. 40(B)



12,.

FIG. 40(C)

